

Abandoned Mines Site Investigations at Saginaw Hill Pima County, AZ



June 2005

Overview

The Saginaw Hill Site consists of two areas of potential contamination—the abandoned Saginaw Mine and the abandoned Palo Verde Mine. These areas are situated within a 540-acre parcel of land owned by the Bureau of Land Management (BLM). The site is located approximately 10 miles southwest of Tucson, Arizona.

Sulfide mining and smelting occurred at the site from the late 1800s through the mid-1900s in the area of the Saginaw Mine and the Palo Verde Mine. Base metal sulfides were mined and used as smelter flux to process precious metal ore brought in from outside the area. The mine tailings, waste rock, and slag left over from mining and processing the ore present a concern for human health and the environment, primarily as a source of metal contamination.

The BLM is conducting site investigations to characterize the source, nature, and extent of contamination associated with the abandoned mines. Information obtained by the site investigations will enable BLM to evaluate **removal action** alternatives to minimize or eliminate the potential release of any site contaminants that would present a risk to human health and the environment.

For public safety, BLM has fenced and signed both abandoned mine sites and has filled 27 open mine shafts identified on the Saginaw Hill property.

What is a Removal Action?

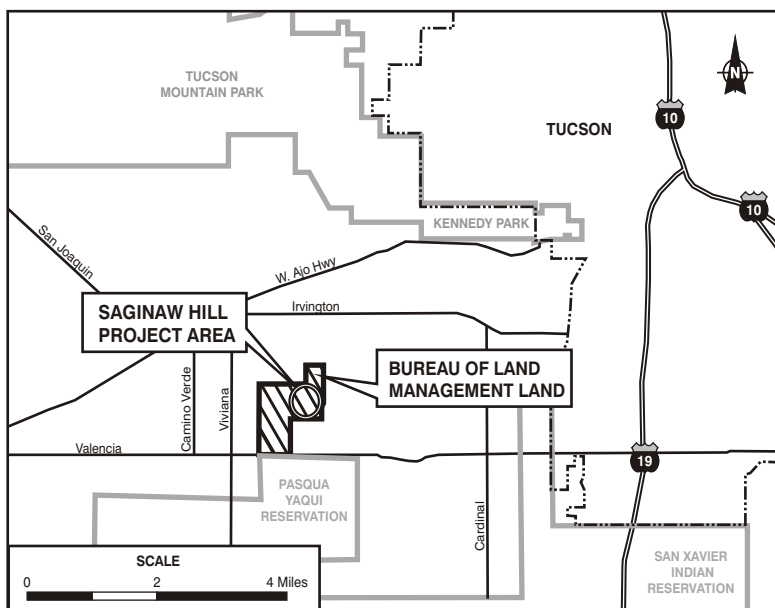
A “removal action” is an action taken to abate, prevent, minimize, stabilize, mitigate, or eliminate a release or threat of release of hazardous substances, pollutants, or contaminants that could be a threat to human health or the environment.

Removal actions are generally completed in four phases:

1. Site evaluation: The BLM identifies the source, nature, and extent of an actual or a threatened release. If the actual or threatened release requires an emergency, or time-critical, removal action, the removal action can be implemented within hours or days.
2. Engineering Evaluation/Cost Analysis: If the actual or threatened release is determined to require a non-time-critical response, BLM proceeds to phase two, a study of the removal action alternatives, known as an **Engineering Evaluation/Cost Analysis**. This study identifies and evaluates alternatives for implementing the removal action.
3. Implementation of the selected removal action.
4. Close-out. BLM determines that the site may be closed out or that additional remedial action is warranted.

What Are the Goals of an Engineering Evaluation/Cost Analysis?

- Identify the problem;
- Identify the objectives of the removal action;
- Identify response actions that will satisfy the objectives;
- Analyze the effectiveness, implementability, and cost of those response actions; and
- Determine the most efficient solution!



What is the Public Involvement Process During a Removal Action?

Technical Process

BLM conducts site investigations to further characterize the extent of contamination, if any

BLM prepares an Engineering Evaluation/Cost Analysis Approval Memorandum to document the need for a removal action

BLM prepares an Engineering Evaluation/Cost Analysis to evaluate the effectiveness, implementability, and cost of removal action alternatives

BLM prepares an Engineering Evaluation/Cost Analysis Action Memorandum to document the agency's decision

6 - 9 Months

9 - 12 Months

Public Involvement Process

- BLM designates public spokesperson
- BLM conducts community interviews
- BLM prepares Community Involvement Plan
- BLM establishes administrative record/information repository

BLM publishes notice of availability of the Engineering Evaluation/Cost Analysis and provides opportunity for public comment

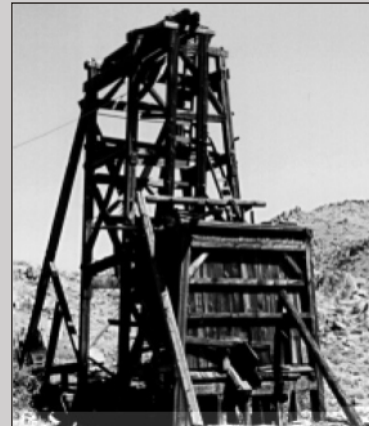
BLM responds to significant public comment

Bureau of Land Management's Abandoned Mine Lands Cleanup Program

- The **Bureau of Land Management (BLM)** manages roughly 264 million acres in 12 western states, in addition to the mineral estate underlying another 700 million acres of state, Native American, private, and other federal lands.
- Over the last 150 years, much of the land managed by the BLM in the West has experienced some form of mining activity, which has left **several hundred thousand abandoned mines** scattered across the western United States.
- Most areas affected by mining activities were not properly reclaimed, and there are no identifiable responsible parties to help with the cleanup, leaving the BLM to deal with the safety and environmental concerns.
- The **BLM's Abandoned Mine Lands Cleanup Program** was developed in order to eliminate or reduce health and safety risks to the public and impacts on the environment.

- The BLM is attempting to identify, prioritize, and take appropriate actions at abandoned mine sites that pose safety risks to the public or present serious threats to the environment.

For more information, visit the BLM's Abandoned Mine Lands Cleanup Program Web site at www.blm.gov/AML.



Golden Gem Mine, near Kingman

For further information on the abandoned mines site investigations at Saginaw Hill, please contact:

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